

REMARKS

New Claims

The original claims 1-25 were rewritten to conform to the Examiner's statement in the Allowable Subject Matter part of the Office Action mailed August 21, 2003:

“Claims 6 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.”

In the Amendment filed Nov. 20, 2003, claims 6 and 8 were cancelled along with the respective intervening claims 5 and 17, and the allowable subject matter included in amended claims 1 and 13. However, the previously allowable matter from claims 6 and 8 has not been allowed based on the same art, applied in the same way, in the subsequent Office Action mailed January 29, 2004.

The Applicants believed and continue to believe that the claims as submitted with the RCE contain allowable subject matter. Therefore, Applicants have chosen to add to the amended claims, the claims as originally presented in the RCE as new claims 26-50 and to argue the allowability thereof below.

Claim Objections

Claim 1 is objected to because of the following informalities: “therebetween” is not a valid word.

It is respectfully submitted that a fundamental principle contained in 35 U.S.C. 112, second paragraph is that applicants are their own lexicographers. They can define in the claims what they regard as their invention essentially in whatever terms they choose so long as the terms are not used in ways that are contrary to accepted meanings in the art. Applicant may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought. As noted by the Court in *In re Swinehart*, 439 F.2d 210, 160

USPQ 226 (CCPA 1971), a claim may not be rejected solely because of the type of language used to define the subject matter for which patent protection is sought.

It is further respectfully submitted that the term “therebetween” is well known to those having ordinary skill in US patent claim practice and a search of the US Patent Office Database since 1976 will show at least **440,235** US patents using this term. In addition, the definition or descriptions of numerous classes / subclasses as defined in the U.S. Patent Classifications include the term “therebetween”. Some of the many examples include the definitions of classes such as 439, 400/634, 52/2.22, 327/203, 277/474, and 198/604. Withdrawal of the objection is respectfully requested.

Claim Rejections - 35 USC §103

Claims 1, 3-4, 9-11, 13, 15, 16, 21-23, and 25 are rejected under 35 USC §103(a) as being unpatentable by Grimsrud (USPN 6,546,437 B1, hereinafter “Grimsrud”) in view of Hosaka et al. (USPN 5,896,292, hereinafter “Hosaka”).

Grimsrud provides that a request for information is received at a peripheral from a computer. A reply to the request is transmitted that will cause a computer using a first computer/peripheral scheme not to use the peripheral. Taken as a whole, Grimsrud teaches that a legacy computer and legacy peripheral communicate to determine lack of interoperability, and how non-legacy peripherals can use this communication to communicate lack of interoperability with either legacy or non-legacy computers.

Hosaka provides an automated system having a monitor computer, which is for remote monitoring and/or analysis of control information of an input/output control device connected to a production facility, a control computer for controlling the processes of operation of the production facility via the input/output control device, and a dual-port memory as an information transmission unit capable of transmitting the control information between the monitor computer and the control computer at a timing that is independent of control of the processes of operation, which is capable of real-time reading/writing to/from memory of the

control computer and is written, workpiece-related data. Taken as a whole Hosaka teaches a control computer independently operated or directly operated from a monitor computer.

Referring to claims 1 and 13, the independent claims have now been clarified to amend the previously claimed combination, as exemplified in claim 1, to now include the limitation that:

“providing a non-legacy processing system for operating independently from the computer system;”

This amendment distinguishes independent claims 1 and 13 from respective independent claims 25 and 38. The support for the amendment is in Specification page 4, lines 26-28:

“And third, is the new processing system, such as a programmer/feeder system, which is generally off-line or generally operates independently from the computer system.”

Applicants also respectfully traverse the rejections since Grimsrud taken as a whole teaches away from the claimed legacy and non-legacy systems that must always work together by teaching how certain combinations of legacy and non-legacy systems are not to work together as taught in Grimsrud col. 5, line 61, to col. 6, line 33:

“FIGS. 8-12 summarize the different possible interactions between legacy and non-legacy computers and peripherals. Referring to FIG. 8, a legacy peripheral 120 is coupled to a legacy computer 100. ...the peripheral 120 sends back...information describing the peripheral characteristics (214). The legacy BIOS 106 stores this information...to control use [or non-use] of the peripheral 120.

Referring to FIG. 9, a non-legacy peripheral 176 is coupled to a legacy computer 100. ... The non-legacy peripheral 176 sends back a reply 210 indicating the peripheral 176 should not be used (216) ... Based on this information, use of the peripheral 176 is denied. ...

Referring to FIG. 10, a legacy peripheral 120 is coupled to a non-legacy computer 174. ... The legacy peripheral 120 sends back a reply 148 identifying the peripheral's characteristics (218). The non-legacy BIOS 128...handles the peripheral in accordance with the traditional computer/peripheral schemes [to use or not use the peripheral].

Referring to FIG. 11, a non-legacy peripheral 176 is coupled to a non-legacy computer 174. ... The computer 174 ... uses the instructions in

accordance with the proposed computer/peripheral schemes [to use or not use the peripheral].” [deletions, underlining, and insertions for clarity]

Similarly, Hosaka taken as a whole teaches away from using incompatible computers since it teaches how control and monitor computers are to be used together as taught in Hosaka col. 2, line 65, through col. 3, line 9:

“...an automated system having a monitor computer, which is for remote monitoring and/or analysis of control information of an input/output control device connected to a production facility which performs machining, assembly, inspection and 10r adjustment of a workpiece, and a control computer for controlling the processes of operation of the production facility via the input/output control device, the system comprising information transmission means capable of transmitting the control information between the monitor computer and the control computer at a timing that is independent of control of the processes of operation.” [deletions and underlining for clarity]

Since Grimsrud teaches that certain combinations of computers and peripherals have to be inoperative together and Hosaka teaches the computers have to be operative together, the references teach away from combination with each other and the combination cannot be obvious because, as explained by the CAFC:

“We have noted elsewhere, as a “useful general rule,” that references that teach away cannot serve to create a prima facie case of obviousness...” *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)[deletion for clarity]

In addition, since Grimsrud assures that certain combinations of computers and peripherals are inoperative together and Hosaka requires the computers to be operative together, the references taken as a whole in combination would produce an inoperative system. This mutually exclusive operation cannot be obvious because the CAFC has also held:

“If references taken in combination would produce a “seemingly inoperative device”, we have held that such references teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness.” *In re Gordon*, supra.

Still further, in *In re Sang-Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002), the Court held that the conclusion of obviousness may not be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or

suggestion in a particular reference. It is respectfully submitted that no reason has been suggested as to why one having ordinary skill in the art would combine computers and peripherals that have to be inoperative together as in Grimsrud and computers that have to be operative together as in Hosaka.

Therefore, it is respectfully submitted that claims 1 and 13 are allowable under 35 USC §103(a) as being unobvious based on Grimsrud in view of Hosaka.

More specifically with regard to the Examiner's comments in the Office Action item #4 and claims 1 and 13, Applicants respectfully traverse the rejections and disagree with the Examiner's conclusions for the following reasons:

The Examiner states in the Office Action:

"Referring to claim 1, Hosaka teaches a method for processing microdevices comprising:

--providing a computer system having processing information related to the microdevices as a task ("*FIG. 1 is a diagram of a legacy computer coupled to a legacy peripheral.*", col. 1, lines 59-60);" [italics in original]

Hosaka does not teach or suggest a method for processing microdevices but for adjusting laser printers. Hosaka FIG. 1 does not disclose what the Examiner states but as described in Hosaka col. 5, lines 26-28:

"FIG. 1 is a diagram showing the system architecture of a system, to which the present invention is applied, for automatically adjusting and measuring a laser-beam printer;"

Hosaka also does not disclose what the Examiner states but as disclosed in Hosaka col. 1, lines 59-60, states:

"If the monitor computer becomes unnecessary or if it should happen to fail for some reason, it will be necessary to alter the program of the control computer or to leave the unnecessary monitor computer connected."

Thus, Hosaka FIG. 1 shows monitor and control computers and not what the Examiner states, and Hosaka col. 1, lines-59-60, shows operation without a monitor computer and not what the Examiner states. And neither citation teaches or suggests either singularly or in combination a claimed limitation as required under 35 USC §103(a).

The Examiner continues:

“--providing a legacy processing system (*FIG. 1 is a diagram of a legacy computer coupled to a legacy peripheral.*”, col. 1, lines 59-60);” [italics in original]

Thus, as explained above Hosaka FIG. 1 shows monitor and control computers and not what the Examiner states, and Hosaka col. 1, lines-59-60, shows operation without a monitor computer and not what the Examiner states. And neither citation teaches or suggests either singularly or in combination a claimed limitation as required under 35 USC §103(a).

The Examiner continues:

“--providing a non-legacy processing system (*FIG. 1 is a diagram of a non-legacy computer coupled to a non-legacy peripheral.*”, col. 1, lines 59-60);” [italics in original]

Thus, as explained above Hosaka FIG. 1 shows monitor and control computers and not what the Examiner states, and Hosaka col. 1, lines-59-60, shows operation without a monitor computer and not what the Examiner states. And neither citation teaches or suggests either singularly or in combination a claimed limitation as required under 35 USC §103(a).

The Examiner continues:

“--providing the task from the computer system to the legacy processing system with constant interaction there between (*FIG. 1 is a diagram of a non-legacy computer coupled to a non-legacy peripheral.*”, col. 1, lines 59-60);” [italics in original]

Thus, as explained above Hosaka FIG. 1 shows monitor and control computers and not what the Examiner states, and Hosaka col. 1, lines-59-60, shows operation without a monitor computer and not what the Examiner states. And neither citation teaches or suggests either singularly or in combination a claimed limitation as required under 35 USC §103(a).

The Examiner continues:

“--providing the task from the computer system to the non-legacy processing system for performing the task by the non legacy processing system independent of the computer system (*The non-legacy computer 174 can include a similar processor 102 and memory 104 as legacy computers 100 (FIG. 1). However, to implement one of the proposed computer/peripheral schemes, the memory 104 of the non-legacy computer 174 stores instructions for non-legacy BIOS 166 and, after being uploaded from the peripheral 176, peripheral-specific instructions 168 for handling functions traditionally*

handled by peripherals in the older computer/peripheral schemes. These instructions 168 can include portions of the peripheral control logic 170 and a portion of the peripheral buffer memory 172 traditionally stored and executed by the peripheral.” Col. 4, lines 3-14);

Thus, as explained above Hosaka FIG. 1 shows monitor and control computers and not what the Examiner states, and Hosaka col. 4, lines 3-14, discloses:

“...and 10r adjustment of a workpiece, and a control computer for controlling the processes of operation of the production facility via the input/output control device, the system comprising information transmission means capable of transmitting the control information between the monitor computer and the control computer at a timing that is independent of control of the processes of operation, wherein the monitor computer has an editor program for creating the software...”

And neither citation teaches or suggests either singularly or in combination a claimed limitation as required under 35 USC §103(a).

The Examiner only applied Hosaka previously, but the Examiner’s parenthetical above recites numbers that appear to relate to Grimsrud.

However, the Examiner’s quote of Grimsrud col. 4, lines 3-14 is a *non-sequitur* because neither computer teaches or suggests the claim limitation of “providing the task from the computer system to the non-legacy processing system for performing the task by the non legacy processing system independent of the computer system” [underlining for clarity]. The quote specifically describes non-legacy BIOS being inserted in the non-legacy computer so the peripheral can upload instructions to the computer, which is exactly backward from the claim limitation.

The Examiner continues:

“--developing return non-legacy information resulting from the non-legacy processing system using the task (*It is inherent in Grimsrud that there are return information resulting from the non-legacy processing system to the peripheral because they are coupled together...* [deletion for clarity; italics in original])

It is respectfully submitted that a computer operating a peripheral, such as a printer, would return information related to operation of the printer and not inherently return information relating to the printing task itself. As indicated in MPEP §2112:

“The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ 2d 1955, 1957 (Fed. Cir. 1993)(reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art).”

Since this inherency is not disclosed in Grimsrud, it is believed that the Examiner’s conclusion is based on the personal knowledge of the Examiner so an Examiner Affidavit pursuant to 37 CFR §1.104(d)(2) disclosing the Examiner’s personal knowledge is respectfully requested so it may be adequately traversed.

The Examiner continues:

“--developing return non-legacy information resulting from the non-legacy processing system using the task...*FIG. 5 is a diagram of a non-legacy computer coupled to a non-legacy peripheral*”, col. 1, lines 66-67” and “*The non-legacy computer 174 can include a similar processor 102 and memory 104 as legacy computers 100 (FIG. 1). However, to implement one of the proposed computer/peripheral schemes, the memory 104 of the non-legacy computer 174 stores instructions for non-legacy BIOS 166 and, after being uploaded from the peripheral 176, peripheral-specific instructions 168 for handling functions traditionally handled by peripherals in the older computer/peripheral schemes. These instructions 168 can include portions of the peripheral control logic 170 and a portion of the peripheral buffer memory 172 traditionally stored and executed by the peripheral.*” Col. 4, lines 3-14;” [repetition of the first line and deletion for clarity; italics and underlining in original]

However, the Examiner’s quote of Grimsrud col. 4, lines 3-14 is a *non-sequitur* because neither computer teaches or suggests the claim limitation of “developing return non-legacy information resulting from the non-legacy processing system using the task”. The quote specifically describes non-legacy BIOS (basic input/output system for performing power-on self test and booting an operating system) being inserted in the non-legacy computer so the peripheral can upload instructions to the computer so the computer can handle functions traditionally handled by the peripheral, which is exactly backward from the claim limitation.

The Examiner continues:

“--returning the return non-legacy information to the computer system (*It is inherent in Grimsrud that there are return information resulting from*

peripheral to the non-legacy processing system because they are coupled together...[deletion for clarity; italics in original]

It is respectfully submitted that a computer operating a peripheral printer would return information related to operation of the printer and not inherently return information relating to the printing task itself. As indicated in MPEP §2112:

“The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ 2d 1955, 1957 (Fed. Cir. 1993)(reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art).”

Since this inherency is not disclosed in Grimsrud, it is believed that the Examiner’s conclusion is based on the personal knowledge of the Examiner so an Examiner Affidavit pursuant to 37 CFR §1.104(d)(2) disclosing the Examiner’s personal knowledge is respectfully requested so it may be adequately traversed.

The Examiner continues:

“--returning the return non-legacy information to the computer system...*FIG. 5 is a diagram of a non-legacy computer coupled to a non-legacy peripheral*”, *col. 1, lines 66-67*” and *The non-legacy computer 174 can include a similar processor 102 and memory 104 as legacy computers 100 (FIG. 1). However, to implement one of the proposed computer/peripheral schemes, the memory 104 of the non-legacy computer 174 stores instructions for non-legacy BIOS 166 and, after being uploaded from the peripheral 176, peripheral-specific instructions 168 for handling functions traditionally handled by peripherals in the older computer/peripheral schemes. These instructions 168 can include portions of the peripheral control logic 170 and a portion of the peripheral buffer memory 172 traditionally stored and executed by the peripheral. “ Col. 4, lines 3-14);*” [repetition of the first line and deletion for clarity; italics and underlining in original]

However, the Examiner’s quote of Grimsrud col. 4, lines 3-14 is a *non-sequitur* because neither computer teaches or suggests the claim limitation of “returning the return non-legacy information to the computer system” where the non-legacy information results from the non-legacy processing system using the task. The quote specifically describes non-legacy BIOS being inserted in the non-legacy computer so the peripheral can upload instructions to the computer so the computer can handle functions traditionally handled by the peripheral, which is unrelated to the claim limitation.

The Examiner continues:

--providing processing system process-specific parameters ("the legacy BIOS 106 can scan I/O ports to detect coupled peripherals", device parameters table 108, col. 3, lines 11-19);"

It is respectfully submitted that claim interpretation requires interpretation of the claim as a whole so it is apparent that the process-specific parameters are for the processes for processing the microdevices below. As indicated in Grimsrud col. 3, 14-16, the Grimsrud peripheral is identified not process-specific parameters relating to whatever process the peripheral may perform:

"The BIOS 106 expects ATA peripherals to return...reply describing the peripheral's characteristics."

The Examiner continues:

--controlling the handling of the microdevices (*"the legacy BIOS 106 can scan I/O ports to detect coupled peripherals", col. 3, lines 11-12;*"[italics in original]

It is respectfully submitted that in English, "controlling the handling" is unrelated in meaning to "detecting".

The Examiner continues:

--processing the microdevices (*"instructions that cause a processor to transmit a request for information to a peripheral", col. 1, lines 43-44;*"[italics in original]

It is respectfully submitted that in English, "processing" is an operation and a "processor" is an apparatus.

The Examiner continues:

--providing a number of microdevices (*"the legacy BIOS 106 can scan I/O ports to detect coupled peripherals", col. 3, lines 11-12;*" [italics in original]

It is respectfully submitted that it is believed that the Examiner's above reading of the claim is by double inclusion of elements in Grimsrud, i.e. reading different claimed elements on the same element in the reference, which render the Examiner's reading indefinite. *Ex parte Kristensen*, 10 USPQ2d 1701 (Bd. Pat. App. & Inter. 1989). The "microdevice" or the "processing system" can be read on the "the peripheral", but not both in the same claim.

The Examiner continues:

--determining the number of microdevices processed (*"the legacy BIOS 106 can scan I/O ports to detect coupled peripherals", col. 3, lines 11-12;*" [italics in original]

It is respectfully submitted that it is believed that the Examiner's above reading of the claim is by double inclusion of elements, i.e. reading different claimed elements on the same element in the reference, which render the Examiner's reading indefinite. *Ex parte Kristensen*, supra. The "microdevice" or the "processing system" can be read on the "the peripheral", but not both in the same claim.

Further, it is respectfully submitted that Grimsrud has no counting capability. Applicants respectfully request, pursuant to 37 CFR §1.104(c)(2), designation of the particular portion of Grimsrud upon which the Examiner is relying.

The Examiner continues:

--determining the number of microdevices handled (*"the legacy BIOS 106 can scan I/O ports to detect coupled peripherals", device parameters table 108, col. 3, lines 11-19;*" [italics in original]

It is respectfully submitted that it is believed that the Examiner's above reading of the claim is by double inclusion of elements, i.e. reading different claimed elements on the same element in the reference, which render the Examiner's reading indefinite. *Ex parte Kristensen*, supra. The "microdevice" or the "processing system" can be read on the "the peripheral", but not both in the same claim.

Further, it is respectfully submitted that Grimsrud has no counting capability. Applicants respectfully request, pursuant to 37 CFR §1.104(c)(2), designation of the particular portion of Grimsrud upon which the Examiner is relying since Grimsrud col. 3, lines 11-19, does not mention this.

Further, it is respectfully submitted that on its face, Grimsrud col. 3, lines 11-19, have no relationship to determining numbers of microdevices handled because it is a "device parameters table". A "parameter table" is merely a set of interdependent variables.

The Examiner continues:

“--developing statistics from the number of microdevices processed and handled (*device parameters table 108, col. 3, line 19*). ” [italics in original]

It is respectfully submitted that it is believed that the Examiner's above reading of the claim is by double inclusion of elements, i.e. reading different claimed elements on the same element in the reference, which render the Examiner's reading indefinite. *Ex parte Kristensen*, supra. The “microdevice” or the “processing system” can be read on the “the peripheral”, but not both in the same claim.

Further, it is respectfully submitted that Grimsrud has no statistical capability. Applicants respectfully request, pursuant to 37 CFR §1.104(c)(2), designation of the particular portion of Grimsrud upon which the Examiner is relying since Grimsrud col. 3, line 19, does not mention this.

Further, it is respectfully submitted that on its face, Grimsrud col. 3, lines 11-19, have no relationship to determining statistics of microdevices processed and handled because it is a “device parameters table”. A “parameter table” is merely a set of interdependent variables.

Referring to claims 3-4, and 9-11, these dependent claims respectively depend from independent claim 1 and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim additional unobvious combinations thereof.

Referring to claims 15-16, 21-23, and 25, these dependent claims respectively depend from independent claim 1 and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim additional unobvious combinations thereof.

More specifically with regard to claims 3-4, 9-11, 15-16, 21-23, and 25, It is respectfully submitted that a prima facie case of obviousness under 35 U.S.C. §103 cannot be made for these claims because the references teach away from the claimed invention as a

whole and there is nothing to suggest the combination. As explained in *Laitram Corp. v. Cambridge Wire Cloth Co.*, 226 USPQ 298 at 293n (D. Md. Mag. 1985), aff'd in part, rev'd in part, and remanded, 785 F.2d 292, 228 USPQ 935 (Fed. Cir. 1986), cert. denied, 479 U.S. 820 (1986):

“The question is whether the prior art, considering its scope and content and the level of ordinary skill, must itself suggest the combination of separate elements into the claimed invention in suit, not just whether it illustrates separate elements.” [underlining for clarity]

Based on the above, it is respectfully submitted that claims 1, 3-4, 9-11, 13, 15, 16, 21-23, and 25 are allowable under 35 USC §103(a) as being unobvious based on Grimsrud in view of Hosaka.

Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimsrud (US 6,546,437 B1) in view of Hosaka et al. (hereinafter Hosaka) (US 5,896,292), and further in view of Tavallaei (US 6,360,291 B1).

Grimsrud and Hosaka have been summarized above.

Tavallaei provides a computer system with an Intelligent Input/Output architecture having a dynamic device blocking mechanism for hiding at least a portion of peripheral devices. Taken as a whole Tavallaei teaches the use of a dynamic device blocker module to hide (logically disconnect) peripheral devices from a processor during operation of the processor.

With regard claims 2 and 14, these dependent claims respectively depend from independent claims 1 and 13, and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim additional unobvious combinations thereof.

Applicants also respectfully traverse the rejections additionally for claims 2 and 14. Grimsrud taken as a whole teaches away from legacy and non-legacy systems that must always work together as claimed by teaching how certain combinations of legacy and non-

legacy systems are not to work together as taught in Grimsrud col. 5, line 61, to col. 6, line 33 (quoted supra.). Hosaka taken as a whole teaches away from using possibly incompatible computers since it teaches how control and monitor computers are to be used together as taught in Hosaka col. 2, line 65, through col. 3, line 9 (quoted supra.). Tavallaei taken as a whole teaches away from the inoperative combination since it teaches how to logically disconnect peripherals to speed up the processor, which would interfere with the operation of the other two references, in Tavallaei col. 4, lines 42-46:

“...hiding the subordinate peripheral devices from the host processor/s and host operating systems is achieved by determining when a host-associated bus transaction is about to be effectuated on a bus to which the subordinate devices are coupled.” [deletion for clarity]

Thus, all three references teach away from each other with Grimsrud teaching how to prevent systems from working together, Hosaka teaching systems having to work together, and Tavallaei teaching how to hide systems from each other. Therefore the “useful general rule” of *In re* Gordon, supra., is useful that “references that teach away cannot serve to create a prima facie case of obviousness”.

In addition, since Grimsrud assures that certain combinations of computers and peripherals are inoperative together, Hosaka requires the computers to be operative together, and Tavallaei requires computers and peripherals to be hidden from each other the references taken as a whole in combination would produce an inoperative system. This mutually exclusive operation cannot be obvious because of the holding in *In re* Gordon, supra., that “[i]f references taken in combination would produce a “seemingly inoperative device”...that such references teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness.”

Still further, it is respectfully submitted that no motivation has been suggested as to why one having ordinary skill in the art would combine computers and peripherals that have to be inoperative together as in Grimsrud, that have to be operative together as in Hosaka, or that have to be hidden from each other as in Tavallaei. The CAFC has held *In re* Sang-Su Lee, supra., that the conclusion of obviousness may not be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference.

It is also respectfully submitted that the cited art merely illustrates separate elements and does not suggest the combination of the separate elements so as to provide a prima facie case of obviousness as explained in *Laitram Corp. v. Cambridge Wire Cloth Co.*, supra.

Based on the above, it is respectfully submitted that claims 2 and 14 are allowable under 35 USC §103(a) as being unobvious based on Grimsrud in view of Hosaka and further in view of Tavallaei.

Claims 7, 12, 19, and 24 are rejected under 35 USC §103(a) as being unpatentable over Grimsrud (USPN 6,546,437, hereinafter “Grimsrud”) in view of Hosaka et al. (USPN 5,896,292, hereinafter “Hosaka”), and further in view of Csipkes et al. (USPN 6,167,401, hereinafter “Csipkes”).

Grimsrud and Hosaka have been summarized above.

Csipkes provides a communications system including a plurality of work stations and a relational database operatively linked therewith. The relational database stores data which is independent of the assembly program and which indicative of the assembly procedure used by the assembly application program. A data structure of the relational database includes a tracking table and an action table, in which the tracking table being used to link to data contained in the action table. The tracking table identifies a type of product, a serial number of the product, and process steps associated with the product, and the action table identifies work instructions, test files and automated manufacturing files. Taken as a whole Csipkes teaches a relational database connected to a number of workstations for assembly and test of workpieces.

Referring to claims 7 & 12 and 19 & 24, these dependent claims respectively depend from independent claims 1 and 13, and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim additional unobvious combinations thereof.

Applicants also respectfully traverse the rejections additionally for claims 7, 12, 19, and 24. Grimsrud taken as a whole teaches away from legacy and non-legacy systems that

must always work together as claimed by teaching how certain combinations of legacy and non-legacy systems are not to work together as taught in Grimsrud col. 5, line 61, to col. 6, line 33 (quoted supra.). Hosaka taken as a whole teaches away from using possibly incompatible computers since it teaches how control and monitor computers are to be used together as taught in Hosaka col. 2, line 65, through col. 3, line 9 (quoted supra.). Csipkes taken as a whole teaches away from the above inoperative system by teaching a system with a relational database that is not required, connected to a number of workstations that serve no purpose in Csipkes col. 2, lines 2-4:

“...a manufacturing facility in which multiple assembly stations are under control of common database driven network...” [deletions for clarity]

Thus, all three references teach away from each other with Grimsrud teaching how to prevent systems from working together, Hosaka teaching systems having to work together, and Csipkes requiring multiple control computers. Therefore, the “useful general rule” of *In re* Gordon, supra., is useful that “references that teach away cannot serve to create a prima facie case of obviousness”.

In addition, since Grimsrud assures that certain combinations of computers and peripherals are inoperative together, Hosaka requires control and monitor computers to be operative together, and Csipkes requires a relational database for multiple monitor computers, taken as a whole in combination would produce an inoperative system. This mutually exclusive operation cannot be obvious because of the holding in *In re* Gordon, supra., that “[i]f references taken in combination would produce a “seemingly inoperative device”...that such references teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness.”

Still further, it is respectfully submitted that no motivation has been suggested as to why one having ordinary skill in the art would combine computers and peripherals that have to be inoperative together as in Grimsrud, that have to be operative together as in Hosaka, or that require a relational database for a plurality of workstations as in Csipkes. The CAFC has held *In re* Sang-Su Lee, supra., that the conclusion of obviousness may not be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference.

It is also respectfully submitted that the cited art merely illustrates separate elements and does not suggest the combination of the separate elements so as to provide a prima facie case of obviousness as explained in *Laitram Corp. v. Cambridge Wire Cloth Co.*, supra.

Based on the above, it is respectfully submitted that claims 7, 12, 19, and 24 are allowable under 35 USC §103(a) as being unobvious based on Grimsrud in view of Hosaka and further in view of Csipkes.

Claims 8 and 20 are rejected under 35 USC §103(a) as being unpatentable over Grimsrud (USPN 6,546,437, hereinafter “Grimsrud”) in view of Hosaka et al. (USPN 5,896,292, hereinafter “Hosaka”), and further in view of Grundy et al. (USPN 5,224,055, hereinafter “Grundy”).

Grimsrud and Hosaka have been summarized above.

Grundy provides a machine for circuit design comprising a processor, a configurable logic device and a design tablet device; the processor having a graphics capability and including a display, a design compiler which compiles a graphics representation of the circuit on said display to a set of coded instructions for the setting of the logic device and the design tablet device; wherein the logic device comprises a set of configurable circuit elements in integrated circuit form for providing a hardware representation of some or all of the digital part of the circuit displayed on said display, said coded instructions being operative to control the logic device to appropriately program said circuit elements; and wherein said design tablet device includes a plug board for plugging in discrete electrical components and devices, bus lines coupled to said processor, and wherein said processor is operative to provide appropriate energizing signals to said bus lines to actuate the discrete electrical components and devices. Taken as a whole, Grundy teaches a design and simulation system for electronic devices.

Referring to claims 8 and 20, these dependent claims respectively depend from independent claims 1 and 13, and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim additional unobvious combinations thereof.

Applicants also respectfully traverse the rejections additionally for claims 8 and 20. Grimsrud taken as a whole teaches away from legacy and non-legacy systems that must always work together as claimed by teaching how certain combinations of legacy and non-legacy systems are not to work together as taught in Grimsrud col. 5, line 61, to col. 6, line 33 (quoted *supra.*). Hosaka taken as a whole teaches away from using possibly incompatible computers since it teaches how control and monitor computers are to be used together as taught in Hosaka col. 2, line 65, through col. 3, line 9 (quoted *supra.*). Grundy taken as a whole teaches away from the combination by teaching a design and simulation system for electronic circuits in Grundy, which would interfere with the with the peripherals of Grimsrud and the adjustment of Hosaka, in Grundy col. 2, lines 2-4:

“...the logic device comprises a set of configurable circuit elements in integrated circuit form for providing a hardware representation of some or all of the digital part of the circuit displayed on said display, said coded instructions being operative to control the logic device to appropriately program said circuit elements;” [deletions for clarity]

Thus, all three references teach away from each other with Grimsrud teaching how to prevent systems from working together, Hosaka teaching systems having to work together, and Grundy requiring configurable circuit element for design and simulation. Therefore, the “useful general rule” of *In re* Gordon, *supra.*, is useful that “references that teach away cannot serve to create a *prima facie* case of obviousness”.

In addition, since Grimsrud assures that certain combinations of computers and peripherals are inoperative together, Hosaka requires control and monitor computers to be operative together, and Grundy requiring configurable circuit element for design and simulation, taken as a whole in combination, would produce an inoperative system. This mutually exclusive operation cannot be obvious because of the holding in *In re* Gordon, *supra.*, that “[i]f references taken in combination would produce a “seemingly inoperative device”...that such references teach away from the combination and thus cannot serve as predicates for a *prima facie* case of obviousness.”

Still further, it is respectfully submitted that no motivation has been suggested as to why one having ordinary skill in the art would combine computers and peripherals that have to be inoperative together as in Grimsrud, that have to be operative together as in Hosaka, or that require configurable circuit element for design and simulation as in Grundy. The CAFC

has held *In re Sang-Su Lee*, supra., that the conclusion of obviousness may not be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference.

It is also respectfully submitted that the cited art merely illustrates separate elements and does not suggest the combination of the separate elements so as to provide a prima facie case of obviousness as explained in *Laitram Corp. v. Cambridge Wire Cloth Co.*, supra.

Based on the above, it is respectfully submitted that claims 8 and 20 are allowable under 35 USC §103(a) as being unobvious based on Grimsrud in view of Hosaka and further in view of Grundy.

Previous Claim Rejections

In the Office Action of 8-21-03, the original versions of claims 26 and 38 were rejected under 35 U.S.C. §102(e) as being unpatentable by Grimsrud (US 6,546,437 B1).

It is respectfully submitted that the Examiner has failed to state a prima facie case under 35 USC §102(e) by using Hosaka in combination with Grimsrud.

Even assuming *arguendo* that Grimsrud is being applied, it is respectfully submitted that the claims do not read on Grimsrud. Below, Grimsrud has been substituted for Hosaka.

The Examiner states in the Office Action of 8-21-03:

“Referring to claim 1, *Grimsrud* teaches a method for processing microdevices comprising:

--providing a computer system having processing information related to the microdevices as a task (“*FIG. 1 is a diagram of a legacy computer coupled to a legacy peripheral.*”, col. 1, lines 59-60);” [italics in original]

Applicants respectfully disagree because the Examiner’s italicized statement shows on its face that there is no disclosure of “a computer system having processing information related to the microdevices as a task” [underlining for clarity].

Further, if the Examiner is reading “microprocessor” on the Grimsrud “legacy peripheral”, this would be an impermissible double inclusion of elements, i.e. reading

different claimed elements on the same element in the reference, which render the Examiner's reading indefinite. *Ex parte Kristensen*, supra. The "microdevice" or the "legacy processing system" can be read on the Grimsrud "legacy peripheral", but not both in the same claim.

Further, if the Examiner is reading "computer system" on the Grimsrud "legacy computer", this would also be an impermissible double inclusion of elements, i.e. reading different claimed elements on the same element in the reference, which render the Examiner's reading indefinite. *Ex parte Kristensen*, supra. The "computer system" can be read on the Grimsrud "legacy computer" or "non-legacy computer", but not both in the same claim since Grimsrud makes clear that both are not in the same Grimsrud system.

The Examiner continues:

"—providing a legacy processing system (*FIG. 1 is a diagram of a legacy computer coupled to a legacy peripheral.*", col. 1, lines 59-60);" [italics in original]

The Examiner is reading "legacy processing system" on the Grimsrud "legacy peripheral", and this would be an impermissible double inclusion of elements because the Examiner has previously read "microdevices" on "legacy peripheral. This results in reading different claimed elements on the same element in the reference, which render the Examiner's reading indefinite. *Ex parte Kristensen*, supra. The "microdevice" or the "legacy processing system" can be read on the "legacy peripheral", but not both in the same claim.

The Examiner continues:

"—providing a non-legacy processing system (*FIG. 1 is a diagram of a non-legacy computer coupled to a non-legacy peripheral.*", col. 1, lines 59-60);" [italics in original]

This is an obvious error because the Examiner has previously correctly stated "(*FIG. 1 is a diagram of a legacy computer coupled to a legacy peripheral.*", col. 1, lines 59-60)" [underlining for clarity].

Assuming *arguendo* that the Examiner is referring to Grimsrud FIG. 5 and reading "non-legacy processing system" on the Grimsrud "non-legacy peripheral", it is clear that there is no disclosure of the claimed element because the claimed "computer" must be read on the Grimsrud "non-legacy computer" and is contrary to the previous reading used by the Examiner of a "legacy computer". Thus, the Examiner is reading the same claim element on

two incompatible embodiments of the reference; i.e., the equivalent to applying 35 USC §102(e) to two incompatible patents since the Grimsrud legacy and non-legacy computers are not usable in the same system.

The Examiner continues:

“--providing the task from the computer system to the legacy processing system with constant interaction there between (*FIG. 1 is a diagram of a non-legacy computer coupled to a non-legacy peripheral.*”, col. 1, lines 59-60);”
[italics in original]

This is an obvious error because the Examiner has previously correctly stated “(*FIG. 1 is a diagram of a legacy computer coupled to a legacy peripheral.*”, col. 1, lines 59-60)”
[underlining for clarity].

Assuming *arguendo* that the Examiner is able to find some interpretation which may fit the relationship of legacy to legacy equipment, there is no disclosure in the FIGs. or related descriptions to disclose providing a microprocessor related task that the claimed element can read on in Grimsrud.

The Examiner continues:

“--providing the task from the computer system to the non-legacy processing system for performing the task by the non legacy processing system independent of the computer system (*The non-legacy computer 174 can include a similar processor 102 and memory 104 as legacy computers 100 (FIG. 1). However, to implement one of the proposed computer/peripheral schemes, the memory 104 of the non-legacy computer 174 stores instructions for non-legacy BIOS 166 and, after being uploaded from the peripheral 176, peripheral-specific instructions 168 for handling functions traditionally handled by peripherals in the older computer/peripheral schemes. These instructions 168 can include portions of the peripheral control logic 170 and a portion of the peripheral buffer memory 172 traditionally stored and executed by the peripheral.*” Col. 4, lines 3-14);

Grimsrud col. 4, lines 3-1, quoted in italics above indicates on its face that the Grimsrud peripheral 176 is dependent upon the computer system. This in addition to the dual reading of the claimed computer system on the Grimsrud legacy and non-legacy computers, which are incompatible in the same system.

Based on the above, it is respectfully submitted that claims 26 and 38 are allowable under 35 U.S.C. §102(e) as being patentable based on Grimsrud because:

“Anticipation requires the disclosure in a single prior art reference disclosure of each and every element of the claim under consideration.” W.L. Gore & Assocs. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983) (citing Soundsciber Corp. v. United States, 360 F.2d 954, 960, 148 USPQ 298, 301 (Ct. Cl.), *adopted*, 149 USPQ 640 (Ct. Cl. 1966)), *cert. denied*, 469 U.S. 851 (1984). Carella v. Starlight Archery, 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir.), *modified on reh’g*, 1 USPQ 2d 1209 (Fed. Cir. 1986); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

The above is in accord with Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co. (730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)(citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983))) where the Federal Circuit stated:

“[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*” [*emphasis added*]

Regarding claims 27-37 and 39-50, these dependent claims respectively depend from independent claim 1 and are believed to be allowable since they contain all the limitations set forth in the independent claim from which they depend and claim additional unobvious combinations thereof.

In the Office Action of 8-21-03, the original versions of claims 25 and 38 were rejected under 35 U.S.C. §103(a) as being unpatentable based on Grimsrud (US 6,546,437 B1), in view of Tavallaei (US 6,360,291 B1), Hosaka (US 5,896,292), Csipkes (US 6,167,401), and/or Grundy (US 5,224,055).

It is respectfully submitted that the reasons these combinations are unobvious under 35 U.S.C. §103(a) have been more than sufficiently addressed above for claims 1-25, and those arguments are incorporated herein by reference thereto.

Based on all of the above, it is respectfully submitted that claims 1, 3-4, 9-11, 13, 15, 16, 21-23, and 25-50 are allowable under both 35 U.S.C. §102(e) and 35 U.S.C. §103(a).

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Conclusion

In view of the above, it is submitted that the claims are in condition for allowance and reconsideration of the rejections is respectfully requested. Allowance of claims 1, 3-4, 9-11, 13, 15, 16, 21-23, and 25-50 at an early date is solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including any extension of time fees, to Deposit Account No. 50-0374 and please credit any excess fees to such deposit account.

Respectfully submitted,



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